



## 复旦大学数学科学学院 数学综合报告会

报告题目: **Long time asymptotics of heat kernels and its applications to Brownian winding numbers**

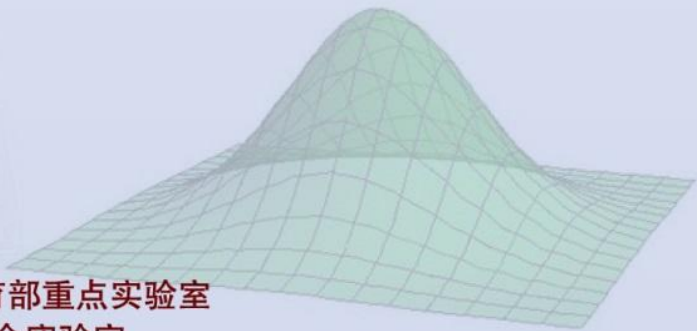
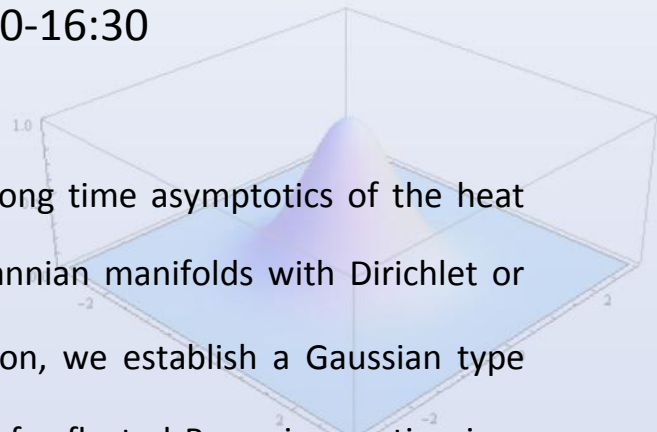
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报告时间: 2017-12-20 星期三 15:30-16:30

报告地点: 光华东主楼 1501

摘要: In this talk, we investigate the exact long time asymptotics of the heat kernel on abelian covering spaces over Riemannian manifolds with Dirichlet or Neumann boundary conditions. As an application, we establish a Gaussian type central limit theorem for the winding number of reflected Brownian motion in a planar domain with multiple holes. In particular, this is a refinement of a classical result by Toby and Werner, in which a law of large numbers was obtained. This is a recent joint work with Gautam Iyer.



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